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avoid the possibility of bad debts, and discontinuity of service at the inconvenience to the customer, there is a need for an instant billing or "recharge" system for casual line usage.

If for example a portable telephone was rented by a hotel rental car company or the like, when the telephone is returned it is desirable that all payments in relation to usage are settled at the time of the return.

The line provider's computer database for billing enquiries would not be directly accessible by the persons renting the telephone and settlement of an account is likely to be delayed or on a credit basis for that reason.

There have been a number of systems proposed for controlling cellular telephone usage some with accounting systems relating to usage.

United States Patent no. 5,761,624 entitled "Method and Apparatus for controlling and recording cellular phone transactions using an integrated circuit card" describes a cellular phone call management system using a microprocessor-controlled remote card reader interface for a cellular telephone system to record calls onto a card as they are placed or received.

A microprocessor reads information from a card placed in the remote card reader and ensures the card is valid.

The cellular telephone's transceiver logic bus is monitored to determine the transaction information of a call as it is placed or received.

After the call is completed, the call transaction information is recorded on the card. When all calls are complete, the card is placed in a host card reader attached to a host computer where the call transaction information is read from the card, processed, and written to a host storage device.

The call transactions may then be analyzed and reports may be generated and printed by host computer software.

This methodology uses a so-called smart card, technologies allow for only minimal data storage does not re-tariff, requires specialised equipment, and is designed for use at fixed locations. The system does not re-tariff calls or set call limits.

United States Patent no 5,631,947 entitled "Mobile telephone device for storing a plurality of changeable charge rates and time of limit data"

describes a system where a mobile telephone is adapted for use as a rental phone.

It has an on-board computer which computes and stores telephone usage of the telephone.

Time and charge limits can be set for the telephone.

For example, the telephone can be set to disable itself for all or a selected category of incoming and outgoing calls after the passage of a predetermined time, and/or when the total usage charges reach set and adjusted remotely.

The telephone is for use in rental vehicles. The telephone is adapted to deliver its stored information when called and interrogated by use of a computer at a station when the rental vehicle is returned.

The telephone can be checked-out and enabled, and the time and charge limits adjusted, all form the same remote station.

The telephone is also particularly valuable in other types of rentals, such as in hotel or motel where the mobile telephone is housed in a portable briefcase or carrying case. The time and charge limits are enforced automatically, and can be changed remotely, as with other versions of the telephone device.

Features also are provided to block unwanted calls intended for a prior renter of the phone; to give charge credits for "dropped calls"; and for selectively locking the phone to prevent unauthorised use for all but emergency calls, data transmission and similar calls.

This methodology is designed to be incorporated in rental vehicles, charging is based on a set tariff, and requires and again requires a user to purchase additional specialised equipment

International patent application no. W096/24229 entitled "Mobile phone with internal accounting" describes a mobile phone system with a mobile phone having internal accounting capabilities for real time call debiting to account for the billing parameters of a mobile phone unit that is operated in a multi zone communication network with a complex rate structure, the mobile phone unit having an internal processor with accessible internal memory for storing the accounting program and call data for each call, the accounting

program including an updatable rate table and a complex billing algorithm such as long distance calls, international calls, and charges, for roaming per day and/or per minute, where the account status of the mobile is calculated in real time for decrementing a debit account, the mobile debit phone having a signal for alerting the user of account status, the mobile phone system including communication system for activating and programming a new phone unit and upgrading the account status in rate table in the phone unit over the airways.

This methodology again involves specialised equipment and adaptation and provide limited information and access regarding telephone usage.

United States Patent no. 5,915,226 entitled "Prepaid smart card in a GSM based wireless telephone network and method of operating prepaid cards" describes a prepaid smart card to be used in a wireless telephone network, and methods of prepaying for wireless telephone services, as well as systems for operating a wireless telephone network with prepaid smart cards.

The cards, methods and systems permit the use of wireless telephones anonymously, and/or the payment by a user without having a subscription.

The invention requires minimal changes to the existing wireless telephone network, yet provides security against abuse or fraudulent use of the telephone system.

Additionally, promotional material may be provided with the prepayments, and persons may prepay into a subscriber's telephone.

This methodology is based on prepaid smart cards, does not allow for tariffs to the varied, and the cards used are not re-programmable. It also lacks a roaming feature.

It is an objective of the present invention to provide a SIM card based rental system which can be adopted by a user without the need to purchase specialised equipment and which provides a comprehensive and adaptable user accounting package.

It is a further object of the present invention to provide a system

which will send tariffs and other relative information to the EEPROM of the SIM, and inter alia, bill call and SMN usage real-time with a pre-set balance, store call and SMS usage to the EEPROM of the SIM, allow the then user to view call usage in metres via the MMI of the GSM handset, change tariffs or other information stored in the EEPROM of the SIM via the SMS message, generate a MO SMS notification message sent for new rental and low balance warning, contain a built-in memory corruption detection and correction system.

Further objects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

DISCLOSURE OF INVENTION

According to the present invention there is provided a method of billing the usage of mobile telephones comprising the steps of:

- (a) Entering a user program onto a SIM card,
- (b) Supplying a hirer with the programed SIM card and software required for rendering accounts and controlling the use of the mobile telephones upon the termination of a hire period.

The software enables the hirer or to set tariffs and credit limits, independently of network suppliers.

The user program and software enables the hirer to add or deduct credit over the air using SMS systems.

The user program provides the hirer with the ability to:

- (a) create and alter credit limits,
- (b) store customer information,
- (c) set tariffs for calls,
- (d) block disallowed calls.

The user program provides the hirer with the ability to allow free calls at its discretion.

According to a further aspect of the present invention there is provided a SIM card resident cellular phone billing system for performing the aforesaid method the system comprising;

- (a) a host processor unit having a P.C. application, and

(b) a SIM card reading apparatus adapted to access and applet associated with the SIM card, characterised in that the host processor at point of issue is programmable using the P.C. application to control the use of a cellular phone and on return of the cellular phone to its point of issue, and re entry of the SIM card to the SIM card reader, to read the SIM card and generate information as to its usage.

The program of the host processor can transfer information on call costs to the SIM card.

10 The program of the host processor can transfer information relating to the telephone user to the SIM card.

The program of the host processor can read information stored on the SIM card relating to calls made, numbers dialled and tariffs associated with the calls.

15 The system can include a cellular phone modem which enables over the air programming and adding or amending credit balances of a SIM card.

According to still further aspect of the present invention therefor there is provided a method of monitoring telephone airtime usage for rental customers comprising means for creating, deleting and editing tariff plans, means to read and write information to the EEPROM of a SIM via the SIM card reader, and means providing a security system for SIM rentals and creating an SMS message user data for changing information in the SIM, display and print call usage.

25 An application / program may be written in Java and embedded into a SIM card that supports version 2 of Sun's JavaCard and supports SIM Toolkit 2+, including event download.

The basic functionality of this application is to bill, restrict, and store call and SMS usage.

30 This application also has a pre-set balance that decrements for each call and SMS message, when the balance is depleted the application restricts the subscriber from making another call or SMS message.

This application uses the event download of the SIM Toolkit from the ME to determine when a call is connected and disconnected.

This application also uses the event download for a MO or MT SMS message.

This application reads and writes all information to the EEPROM of the SIM at the beginning, during, and at the end of a call.

5 This information is broken down into the meter, tariff, and call tables.

The application displays the balance and call information (i.e. number, charge, and tariff) to the MMI of the ME via the SIM Toolkit.

10 The subscriber has the ability to scroll through the calls and SMS messages made and view the relative information.

The rental process consists of a SIM card with the embedded application, the ME, the SIM card reader and the Windows PC application.

15 The SIM card's EEPROM is initialized via the SIM card reader at the time of rental (i.e. balance and tariffs).

The subscriber then proceeds to make calls and SMS messages until the balance is depleted.

20 The MS and the SIM card is then returned by the Window PC application reading the calls and SMS messages made. This completes the rental processes.

A security risk may occur if the SIM card is removed from the MS and inserted into another MS that does not support event download. This problem can be solved if the SIM has the ability to check if the MS supports event download and if it doesn't lock the SIM.

25 Another solution is to lock the SIM and MS at the network level.

There is no risk in roaming because the rental application has the ability to bill or restrict roaming. Therefore the SIM card should allow roaming.

30 The following tables in this section may be stored in EEPROM that are used by the rental application. This information is read and written one record at a time.

Table Meter

The meter table contains the balance and other setup information for

the rental application. The size of the table is 11 bytes and there is only 1 record stored in EEPROM.

Bytes	Description	Length
1-2	Initialized	2
3-4	Balance	2
5	Seconds in cycle	1
6	Minimum seconds	1
7	Cyclical call storage	1
8-9	Current call	2
10-11	Last call	2

Table Tariff

The tariff table contains the information for calculating the cost for a MT call, MO call, MT SMS message, or MO SMS message. The size of the table is 19 bytes and there are 100 records stored in EEPROM.

Bytes	Description	Length
1	Type	1
2-3	Country code	2
4-5	Network code	2
6	Barred	1
7-8	International code	2
9-17	Pattern	9
18-19	Tariff	2

Table Call

The call table contains information of the call or SMS message that occurred. The size of the table is 20 bytes and there are 100 records stored in EEPROM.

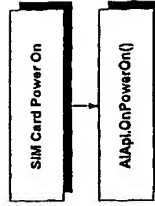
Bytes	Description	Length
1	Type	1
2-3	Country code	2
4-5	Network code	2
6-14	Number dialed	9
15-16	Tariff	2
17-18	Length	2
19-20	Charge	2

Functional Flow

This section describes the functional flows of the SIM based rental application.

Power On

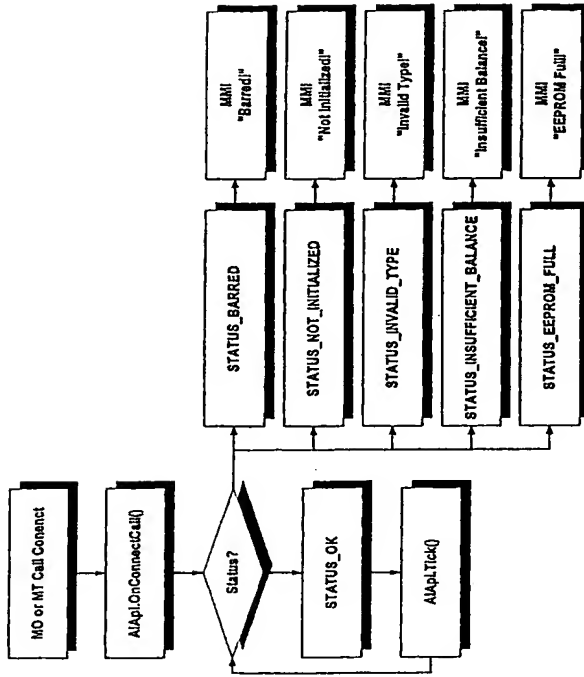
The following diagram describes the functional flow for when the SIM card powers on.



MO or MT Call Connect

The following diagram describes the functional flow for a MO or MT call connect.

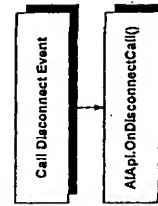
10



5

Call Disconnect Call

The following diagram describes the functional flow for a call disconnect.

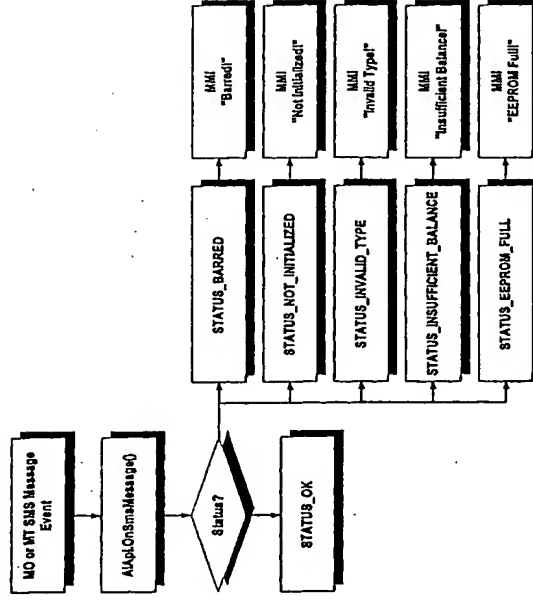


10

11

MO or MT SMS Message Event

The following diagram describes the functional flow of a MO or MT SMS message event.



5

MMI

The MMI for the rental application consists of the balance and display the call information. The MMI has the ability to scroll through the calls to display the information.

10

API

The API methods are found in the class APl. The following methods are used to interface with the application.

15

Method On Power On

This function is required to be called when the SIM card powers

on. This function reads table meter from EEPROM.

ξ Parameters

None.

ξ Return Values

5

None.

Method On Connect Call

This function is required to be called when the SIM card receives a connect event message. This function calculates the tariff of the call, determines if the call is barred, and saves data to EEPROM.

10 ξ Parameters

bType Type of call (i.e. TYPE_MT_CALL or TYPE_MO_CALL).
sCountryCode The current country code the MS registers from the network.

15 **sNetworkCode** The current network code the MS registers from the network.

bNumber Number dialled for a MO call.

sLengthOfCall Length of the number dialled for a MO call.

ξ Return Values

20 Returns STATUS_OK if the function succeeds and any other value if the function fails.

Method Tick

This function is required to be called when during a MO or MT call as frequently as possible. The number of ticks represents the number of seconds that have elapsed from the last time this function was called.

25 ξ Parameters

sNumberOfTicks Number of seconds that have elapsed from the last time this function was called.

ξ Return Values

Returns STATUS_OK if the function succeeds and any other value if the function fails.

Method On Disconnect Call

5 This function is required to be called when the SIM card receives the disconnect event message. This function terminates the call.

ξ Parameters

None.

ξ Return Values

10

None.

Method On Sms Message

Processes the MT or MO SMS message.

ξ Parameters

15 **bType** Type of message (i.e. TYPE_MT_SMS or TYPE_MO_SMS).

sCountryCode The current country code the MS registers from the network.

20 **sNetworkCode** The current network code the MS registers from the network.

ξ Return Values

Returns STATUS_OK if the function succeeds and any other value if the function fails.

Method Get Call

Retrieves the requested call record.

ξ Parameters

BNavigationType Navigation type.

14

ξ Return Values

Returns STATUS_OK if the function succeeds and any other value if the function fails.

5

Method Get Data

Returns the ASCII representation of the data type requested.

ξ Parameters

bType Type to represent in ASCII.

bBuffer Target buffer the ASCII is written to.

sSizeOfBuffer Size of the target buffer.

10

ξ Return Values

Returns STATUS_OK if the function succeeds and any other value if the function fails.

Aspects of the present invention will now be described with reference to the accompanying drawings with reference to the accompanying drawings in wherein:

15

Figure 1: is a schematic drawing of system components for a billing system according to the present invention, and

Figure 2: is a schematic drawing of a rental company operation using the system of figure 1, and

20

Figure 3: is a schematic drawing of the use procedures of a hired telephone, and

Figure 4: is a schematic drawing indicating the means by which a hired telephone is updated with a new credit, and

Figure 5: is a schematic drawing indicating the procedures adopted in closing off a hire period.

25

With respect to figure 1 of the drawing the service provider (SIMBILL) adds an applet to a SIM card and the card is entered into a users card reader. SIMBILL software is then entered into the users computer as will as the companies details. The provider sends on a security file to the users computer and the user is then able to create tariffs.

30

15

As illustrated by figure 2 having selected a tariff and entered rental customer details the user enters a credit limit and rents a telephone.

As is indicated by figure 3 a number controls and checks can be made on the rental telephone and each call made is subject to the procedures and data morals indicated.

5

As indicated by figure 4 whilst the telephone whilst the telephone is out on hire the user is able to SMS message the telephone and update credits.

Finally as illustrated by figure 5 on return of the telephone individual SIM cards can be placed in a reader and an up-to-the-minute it email bill produced.

10

The provider (SIMBILL) user manual marked ATTACHMENT is annexed hereto for the purpose of further explanation of the present invention.

There are many advantages of this invention both technical and commercial including.

15

1.1 The application is embedded into the SIM card so that it will work with any GSM that supports phase II of the SIMToolkit.

1.2 Since the SIMRent application is embedded into the SIM card the handset is allowed to roam on any GSM network because the application has the ability to capture the location network information and bill real-time. This real-time billing capability, roaming, isn't currently offered in the market place.

20

1.3 The SIMRent application also allows the subscriber to view their current balance and calls/SMS usage on the MMI (Man-Machine-Interface) of the handset. This on demand MMI capability is not currently available.

25

1.4 The rental company has the ability to update and retrieve information from the SIMRent application via the SMS (Short-Message-Service) message (i.e. update balance or retrieve calls).

1.5 The SIMRent application has the capability to bill for national calls, international calls, emergency calls, roaming calls, and SMS messages real-time. The application can also barr any call or SMS message and restrict any usage when the balance is depleted.

30

1.6 The SIMRent application allows for any hotel, rental car agency

16

or network operator to easily and securely rent GSM handsets and provide a itemized bill of the usage on demand.

Aspects of the present invention have been described by way of example only and it will be appreciated that modifications and additions thereto may be made without departing from the scope thereof, as defined in the appended claims.

17

FIG. 1 is a schematic diagram of the system.

SIMBill help

SIMBill

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Simbill Simbill

Registering *1

Contents

18

Setup	4
Registering	7
Completing the registration form	7
Setting up the program	12
License fees	13
Information and prices	13
License Fees	14
For license fees please consult our web site www.simbill.com	14
SIMBill - Starter Pack Includes	14
Additional SIMBill Program Licenses	14
SIMBill Messenger	14
SIMBill SIMBill Reports	14
Sim Card	14
Additional Sim Card Readers	14
Users	15
Setting up passwords and user rights	15
Descriptions of User Rights	16
Default settings	19
Entering the default settings	19
Tariff plans	21
Creating new tariffs	21
Saving a tariff plan	25
RENTING SIMS	27
PROGRAMMING THE SIM CARD	27
RETURNING A SIM	29
Logs	31
Managing log files	31
SIMBILL Reports	33
The Report Menu	34
SIMBill Reports Like User Manual	35
Introduction	35

19

Report Sorting	37
Printing	37
Report Exporting	37
Reports Available	38
GST/VAT Report	38
Total Invoiced Report	39
SMS Report	40
Rental/Return Report	41
Sales Report	42
Sales Report	43
Network Calls Report	44
Profit/Loss Report	46
Call Usage Report	47
SMS	49
Updating files by SMS over the air	49
Sending SMS's	53
Updating Sim card over the air	53
SMS Messenger	53
Installing SMS Messenger	53
Network Codes	55
Network & Country codes	55
Trouble shooting	61
Most common problems	61
Glossary of Terms	63
Index	65

Setup

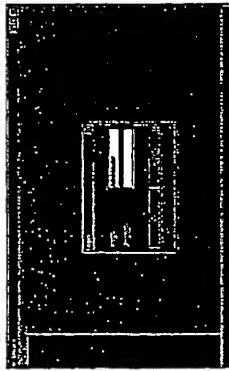
Connect the SIM CARD READER to a COM port on your computer and connect the PS2 plug into the keyboard/mouse or PS2 Connector. The PS2 connector has an adapter to take the keyboard/mouse plug if required. Insert CD and follow instructions.

The setup wizard will guide you through the installation process. You must register SIMBIII before you can use the program.

The following steps will assist you in completing the registration. After you have completed the SIMBIII installation. Double click the SIMBIII icon on your desktop.

A SIMBIII blank screen and login window will appear.

YOU CANNOT LOGIN AT THIS TIME. Logging on is only possible once you have registered your software and received a registration file.



Click "Cancel" on the login window to hide it. FILE, SMS and HELP can be seen on the task bar.

Click on Help then click about.

Registering

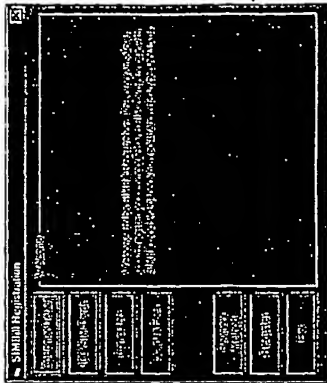
Completing the registration form

This form must be completed prior to operation of any SIMBIII software.

Insert the Installation CD.

Click on the SIMBIII Registration Icon

You will see 7 blocks on the left of the window



The top box should have all the serial numbers you obtained when you installed SIMBIII on each computer.

The second box should have the SIMBIII Messenger serial numbers for the computers on which you installed SIMBIII Messenger.

The last box should have the SIMBIII Reports serial numbers for the computers on which you installed SIMBIII Reports.

Click on License Fee.

This is a text file listing all license fees and charges.

Please note these prices may not be correct at time of registration.

The registration software will automatically calculate all charges at the end of registration.

This is only an information screen no input is required

Then click on "Payment Method". You total cost will be displayed. Complete the method of payment.

If the amount payable is not correct go back to Computers or ICCRUM Cards to correct

Then click on register.

Print - Will print a hard copy for filing or sending by post.
Save To Disk - Will create a file to email.
This file should always be emailed even if posting.

The information on the registration file will be saved. When you need to again purchase additional software or add Sims run this registration program by clicking on the Registration icon located in Start, Programs, SIMBIII Registration. All your previously stored information will already be on the form allowing you to add the additional Sims cards and/or programs you require. Submit the registration in the same manner as the original registration together with the additional payment.

To E-mail registration file.

Click Save to disk. You will be prompted to select a path into which to save the registration file. This should be e mailed to registration@simbiii.com

26

Setting up the program

On receipt of the registration file double click on the registration icon (the one sent to you by e-mail). This will register your program (must be done on all computers).

If you have already registered and are adding additional components you will be sent a new registration file. Double click the file and it will register your additional SIMBILI programs and/or tin cards.

Click on the SIMBILI icon

The login window will appear with the user name "Administrator". Enter the password you sent us with your registration; this will log you on in "Administrator" access level. To re login using "Administrator"

Type "Administrator" (Capital A) followed by your password.

Note: User names and passwords are case sensitive.

You can now setup usernames and passwords see section on setting up new users.

27

License fees

Information and prices

If you are paying your license fees by credit card or bank transfer it is not required to print. If you are calling a Cheque or draft please print out a copy of the registration form to enclose with your payment.

Upon receipt of this e-mail and cleared funds* we will e-mail you back a registration file with further instructions.

*Cleared funds

In the case of a credit Card, on us obtaining an authorisation from the merchant. Normally immediate. In the case of a bank transfer. Upon receipt by our bank, free of commission and charges. In the case of a Bank Cheque or Cashiers Check. Upon receipt. In the case of a company or personal Cheque 3 business days after receipt for cheques drawn on Australian, New Zealand and South African Banks. In the case of a cheque drawn on a bank of any other Country. When cleared by our bank.

When you receive the registration file this must be run on each computer you sent us the installation serial number for. The same file is used for all computers and will only register the computer serial numbers and tin card numbers provided to us in the registration form. It is possible to add Computers and tin Cards at any time by requesting the registration form and adding the new tin card ICCID's and Computer serial numbers. For security reasons the password selected in any subsequent registration forms must be the same as in the initial Registration.

License Fees

For license fees please consult our web site www.simbill.com
The registration form will automatically calculate the license fees due, these fees subject to change at time of registration.

SIMBill – Starter Pack Includes

- 1 (One) Sim card reader
- CD Rom Containing SIMBill program, SIMBill Messenger, SIMBill SIMBill Reports Handbook
- Licenses for 3 (Three) computers for SIMBill not including SIMBill Messenger licenses, SIMBill Reports licenses or Sim Card licenses.

Additional SIMBill Program Licenses

First 3 (Three) computers included with purchase of starter pack
Additional computer requires a one off license fee

SIMBill Messenger

Each computer requires a license

SIMBill SIMBill Reports

Each computer requires a license

Sim Cards

Each Simcard requires an annual license

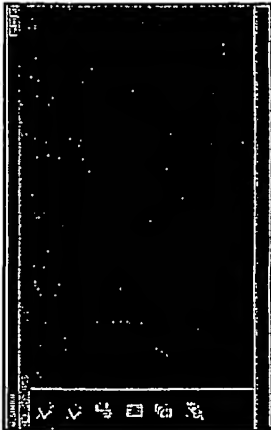
Additional Sim Card Readers

Available on request

Users

Setting up passwords and user rights

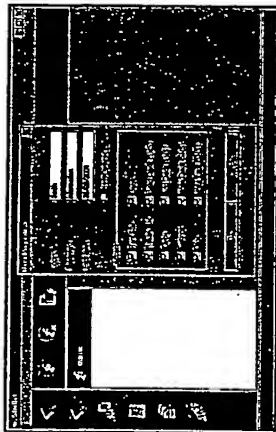
Double click on the SIMBill icon on your desktop.
The login window will appear.
Enter Administrator as the user name
Enter your password in the password box (this is the password you sent in on your registration form)
Click "OK"



The screen will now have six icons down the left side
Green picture of film card reader used for "RENT SIM"

- Red picture of sim card reader used for "RETURN SIM"
- Picture of a gear and a typed page used for "SETTINGS"
- Picture of a printed page with pen used for "TARIFFS"
- Picture of multi printed pages used for "LOGS"
- Picture of faces used for "USERS"

FIRST Click on "USERS" the bottom icon of faces.



Three icons will appear on the top of the window

- 1st New User
- 2nd Delete User
- 3rd User Properties

A window will appear showing the Login name Password and Expiry date as well as 10 boxes with specific access rights.

Now click on New User

Enter a user name and password and expiry date or you can select never expires then assign access rights by selecting the box next to the rights you want to assign. You can create another password with full administrator rights by selecting all boxes as well as never expires.

Descriptions of User Rights

- a) Rent Sim

This is a term used by us to describe the programming of a sim card with a tariff plan and credit limit. While these are the only compulsory fields more customer and sim card information can also be stored. Each Sim must be programmed initially as un-programmed Sims will not work in the phone.

b) Return Sim

This is a term used by us to read the information off the sim card. This would include credit balance and limited call data record of calls made, as well as any additional information that was stored at time of "rent".

These are the minimum access rights any user should have.

Rent Sim will enable the user to give out sim cards assign tariffs (if permitted in settings, otherwise a default tariff is assigned) Assign a credit limit and capture all additional customer and sim card information.

Return Sim will enable the user to read information off sim cards and print STATUS Reports or a customer invoice, showing all charges and customer information.

c) Tariffs

This access right is only given to senior staff that are permitted to create new tariff plans or amend existing tariff plans. More information on this can be found under Creating/amending Tariff plans. For more information on how to create and save a tariff plan see "Creating tariff plans"

d) Settings

This access right should only be given to senior staff that are permitted to change company information, tax rate or default tariff plans. For more information see "Setting default settings"

e) Logs

This gives the user access to the log files created on every rental, return and SMS created.
For more information see "Managing and Exporting log files"

f) Add Credit (SMS)

This gives the user access to add credit to a sim card remotely over the air. This can be done with or without SMS Messenger See "Updating sim card by SMS"

g) Write Credit

This is the same as Add credit but overwrites instead of appending credit to "Updating sim cards by SMS".

h) Write Tariff

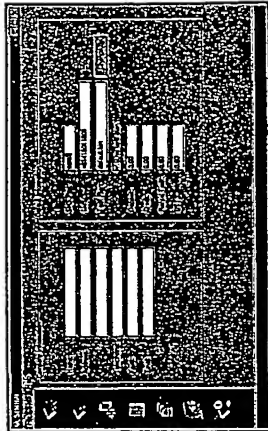
This allows the user to remotely amend the tariff plan on the sim card, over the air. This can be done without "SMS Manager". More info re "Updating sim cards by SMS". This access requires the user also has access rights to "tariff".

Once you have assigned the user rights and empty click on "ok" then repeat until you have assigned all user rights. This must be done on each computer that the user will have access. Users will only see the icons they have access to. You can change any user rights at any time with an Administrator password, which you must keep secure.

Default settings

Entering the default settings

Click on the "settings"



Enter your company or branch name address telephone number and e-mail address. This can be different for each branch if you have external branches or agents. This will be the information that appears on all invoices logs and SIMBill Reports created by that computer.

On the right of the "settings"

Enter the COM port that the Mobile phone or Cellular modem is connected (if connected if not leave blank)

Enter the SMSC number of the network you are in e.g. Australia +61(150)1501 South Africa +27(21)29 or New Zealand +64(160)600

NB. If you have not activated SIMBILI messenger and connected a Mobile Phone or Cellular modem to send messages you do not have to capture the SMSC or CCID port. If you have activated SMS Messenger and installed a cellular phone or Cellular modem you must capture this information.

If required select a default tariff. If you select use default tariff this tariff will be used when sending out a sim without a choice of tariff plan. If not selected the user will get a list of available tariffs to allocate to that sim, even if the user does not have "tariff" user rights.

The next box is default "Deposit".

If you enter an amount of money in this box it will default to that amount on each rental, but give all users the option to change or remove it. An amount should only be entered in this box if you take a deposit of a usual amount on must rentals. This deposit will be deducted from the invoice total when the invoice is printed. *This deposit is not a credit limit.* A client could have a deposit of \$1000 and a credit limit of only \$100, the other \$900 being security for a handset. In all cases the client will only be able to make calls up to the credit limit.

The next box is the default "Credit Limit"

If you have a regular credit limit you give clients it is advisable to enter an amount into this field. As credit limit is the only mandatory field in the rental, if no amount is entered here you can assign a credit limit at time of rental.

The next box is "Rental Tariff"

Only enter an amount here if you charge a daily rental for Sim cards and handsets. If you charge a handset or a time of rental a daily charge of this handset and handset GST or VAT will be charged on the customer invoice but not deducted from their credit limit.

The last box in this section is "GST"

Here you must enter your GST or VAT rate. Expressed in decimal format i.e. 0.10 for 10%.

Reader Information

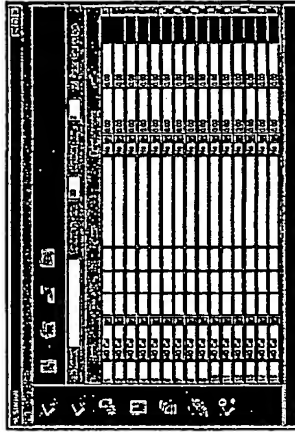
Select the COM port you have connected the sim card reader to. The type library and protocol may depend on which sim card reader you are using. For security reasons SIMBILI will only operate on certain Sim card readers supplied by us. These settings are set correct by default to the reader supplied to you and should only need to be changed if you change to a different reader. For more information on setting for different readers visit our website www.simbili.com.

Tariff plans

Creating new tariffs

This is the most critical part of your setup, as it is the program that re-tariffs the calls on the sim card used by your client. An error here can cost you money as you could undercharge or overcharge and have a disgruntled client, so pay particular attention to this section and check your tariff program before using it on clients.

Click on "Tariff"



Four icons will appear on the top of the window,
New tariff plan

36

- Open tariff plan
- Save tariff plan
- Sort

Supplied with your program there are three sample tariff plans:

- SA.bin - for use in South Africa
- AUS.bin - for use in Australia
- NZ.bin - for use in New Zealand

Click on "Open Tariff Plan"

The above three options will appear select the file you wish to modify. For the purpose of this tutorial we will explain in detail the AUS.bin file.

You will see the above tariff table

Top line next to file name you will see "Seconds In Cycle" this is the billing cycle you are billing in example 30 second or 60 seconds (these are your only two options) select 30 or 60

Next to that box is "Minimum Cycle" This is the minimum cycles per call charge i.e. you are billing in 10 second cycles with a minimum of one minute per call. In this case enter 2 under minimum cycle. If you have no minimum enter 1.

On the table the tariffs are numbered down the left margin. Next to each number you can enter one tariff.

The first box on the tariff table is "MCC" the next "MCN" A list of MCC's and MCN's are included in this file see "MOBILE COUNTRY, NETWORK and EXIT CODES"

The next box is the call Type; you have a choice of eight call types

"MO Call national", mobile originating call to a number in the same country as your home network

37

"MT Call national", mobile terminating call. An incoming call while in the same country as your home network.

"MO Call International" mobile originating call to a country different to that of your home network.

"MT Call International" An incoming call when you are roaming that is logged into a network of a foreign country.

And the same four choices apply for SMS. Text messages sent or received.

The next box is the barred box. You have two choices yes or no. If "no" is selected no calls of this type will be allowed.

The next is the pattern.

Here you will enter the different types of calls you are billing for.

The next box is "access fee" only applicable if you charge a one time setup or connection cost.

The last box is the "tariff". This is the amount that will be charged for that type of call per cycle as set up above 30seconds or 60 seconds. If the call is less than the minimum cycles entered above the minimum number of cycles will be charged.

Sample Tariff Plan

Let's enter a few tariffs to get the hang of programming tariffs.

For the purpose of this example we will make VODAFONE AUSTRALIA our home network. The MCC (mobile country code) is 300 and the MCN (mobile network code) is 7 (all networks within Australia) the Exit code to make an international call out of Australia is 0011.

This information will be dependent of the country you are in. E.g. New Zealand the MCC is 330 and South Africa is 655 the mobile network code can be entered as 7 in all cases but if you want to restrict calls to a specific network in the country you can enter the MCN e.g. Vodafone Australia 03, Vodafone South Africa 01

All this information is available for most GSM networks on this file see "Mobile country, network and exit codes"

Let's analyze the sample Aus.bin tariff plan and discuss how to amend tariffs.

Line 1 in the diagram above. In the call type MT SMS is selected this is Mobile Terminating SMS we have put question marks the MCC MCN and Pattern and have not entered any access fee or tariff.

This will allow free incoming SMS's anywhere in the world. If you wanted to restrict incoming to only Australia we would replace the question mark with the MCC to 300. Although there is no charge or no restriction in that tariff file we will have to enter it as if the program does not find an applicable tariff this type

of call will be barred. So even to allow free calls we have to program the call type as free.

Line 3. MO SMS. Here we have specified MO SMS for use while only in New Zealand. The rate of \$0.16 by entering this in a recent time instead of the Tariff Plan is a flat rate and no per cycle rate is applicable.

In line 3 we have again programmed MO SMS but instead of \$0.16 in the MCC we have placed a Question mark and changed the tariff to \$0.99 this will charge \$0.99 if the MO SMS is sent while logged into any network anywhere in the world other than Australia.

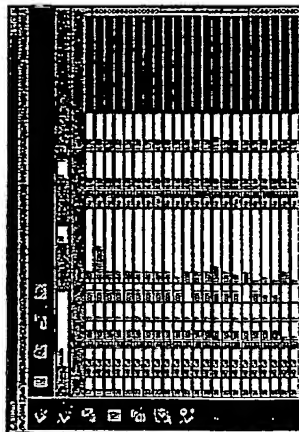
Line 4. MT Call. While in Australia are free but again this has to be programmed in order to allow incoming calls in Australia.

Line 5. MT Call. While in New Zealand the different between these two is we have replaced the MCC with the New Zealand country code 310 instead of 505 and imposed a charge.

Line 6. MT Call. We have again replaced the MCC this time with a Question Mark meaning any Country then those programmed will pay as incoming charge in this case \$4.00 per cycle. You can enter as many specific country codes and rates as you like. But make sure you have a wild card tariff that is a Question Mark in the Country code and this tariff should be high enough to cover the highest incoming roaming call rate.

Line 7-11. This deals with calls to specific numbers that are free if dialed while in Australia.

Line 12-25. This deals with international calls to specific countries as specified rules if called from Australia. Except Line 18



Line 18. This is a free call to a specific number

Line 26. This is calls to any other international number not already specified here we have added an asterisk as well as a tariff the asterisk will be a flag call charge on connection and the per cycle tariff will be added to this.

Line 27-33. Examples of calls to specific numbers at various tariffs.

Line 34. This is the default of any local call in Australia not already programmed

Line 35. This is the default of any international call if dialed while roaming in New Zealand.

Line 36. This is the default cost of any local call within New Zealand while roaming in New Zealand.

Line 37. This is a free Emergency call dialed from any country in the world. Line 38. This is the default call rate for any call made while roaming to any country not programmed.

Important Notes on tariffs.

You can add as many tariffs as you like as long as you keep within the 50 lines of available tariffs.

It's not important in which order you capture the tariffs, as the program will auto sort.

It is important to have wild card tariffs for every type of call and then program the exceptions to avoid billing unperformed calls.

You must always program a default of the six main groups.

- MO SMS
- MT SMS
- MO Call - Local
- MT Call - Local
- MO Call - International
- MT Call - While Roaming

Saving a tariff plan

Once you have created all the tariffs you require you can name and save this. To do this, click on the 3rd icon from the left on top, picture of a computer and disk. This is the Save Tariff Plan icon. A window will pop up with a path this is the default path for storing tariffs. You will be asked to enter a name for this Tariff Plan. You can call it any name you choose, Default Tariff, Rental Tariff, Special Tariff for VIP's etc.

If you have more than one computer, doing rental and returns, you must copy this tariff to all these computers. To copy, copy the entire sub directory onto a floppy disk then copy from this disk to the same directory on all the other computers. You must remember that if you make changes to any tariff plan you must copy the changes to all computers.

Once you have named and saved a tariff plan you can go back to Settings to make this a default tariff, if it is the only tariff you use.

RENTING SIMS

PROGRAMING THE SIM CARD

A sim card has to be "rented" before it will operate on the Simbill system. To do this you must first have created a tariff plan and set your default settings.

Place the sim card in the sim card reader and click on the green sim card reader icon (top left) if you have not entered a default tariff plan by checking the "use default tariff square" a list of available tariffs will appear for you to select one. If you have selected to use a default tariff or once you have selected a tariff the following customer information window will appear.

Customer Information

NAME:	08112234556677889
MSISDN:	000000000000000
PHONE:	996552060
EXTENSION:	
EXPIRATION DATE:	07/2001
RENTAL DATE:	
RENTAL PERIOD:	
RENTAL TYPE:	33.00
RENTAL CREDIT:	Credit Card
RENTAL AMOUNT:	33.00
RENTAL PERIOD:	400
RENTAL DATE:	31/07/2001

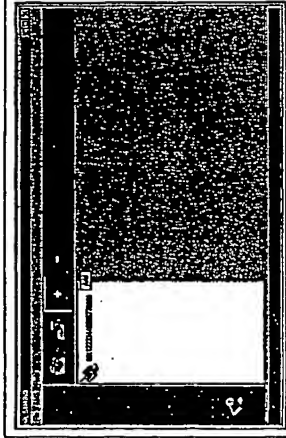
The first line box will be automatically read off the sim card.
The second line requires you to fill in the first (serial number) of the cell phone you are going to use with this sim. This number is printed on the back of the phone under the battery or you can type **06 # (star, hash, 06 hash) on the key pad of your cell phone and the serial number will be displayed on the screen of the phone. This will LOCK THE SIM CARD TO THIS PHONE. It will not be possible to use this sim on any other phone other than the number you entered here. Please make sure you do not make a mistake and test the sim in the phone when complete.

The mainline is the mobile phone number attached to this sim card. If you have previously rented out this sim card the number will default to the last number used on this sim.
Simbill generates a unique agreement number for each transaction but you can overwrite this to your own agreement or reference number.

The Customer name and address are optional information fields for invoice printing and reports. The credit card info is also optional.

You now have a screen with only one icon (Sincard reader). If you do not have the ICCID numbers of your sim card (required to complete the registration form) you can obtain the ICCID numbers of each Sincard in the following way: (You do not have to be logged in or registered to perform this function).

- a. Insert Sincard into card reader and click the icon
- b. Click on the green Add icon. This will automatically read the ICCID of the sim card and display the ICCID for additional records just place the Sincard into reader and click Plus. A list of all your ICCID's will be displayed
- c. To remove any ICCID's you do not want to be listed select the ICCID and click the Red remove icon
- d. Once you have listed all the ICCID's save them to a file by clicking the save icon next to the Add icon. This file can be attached to your registration form by just typing see attached file in your list of ICCID's on the registration form.



To obtain the "SIMBill Messenger" product serial number

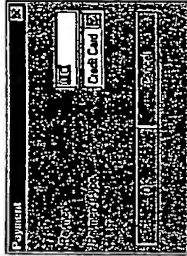
This serial number is the same as your SIMBill serial number. On the main SIMBill program menu Click help, About and the serial number will be displayed.

To obtain the "SIMBill Reports" product serial number

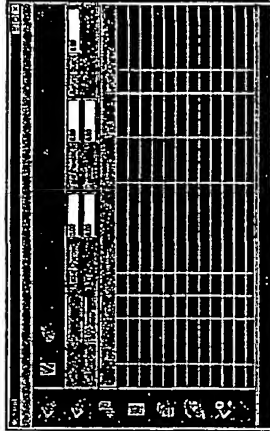
//installed

Click on the SIMBill Reports icon located in "Start, Programs, SIMBill reports. You will be asked for a registration key (You do not have the Key at this time). Above this is the serial number you will need to obtain the registration key write this down. You need to repeat this process on every computer you wish to operate SIMBill SIMBill Reports on, as the serial number will be different on each computer.

Reboot your computer to initialize the sim reader at any time prior to first use of the reader.



The customer information will appear and allow you to edit certain fields only. Deposit and Credit limit cannot be edited.



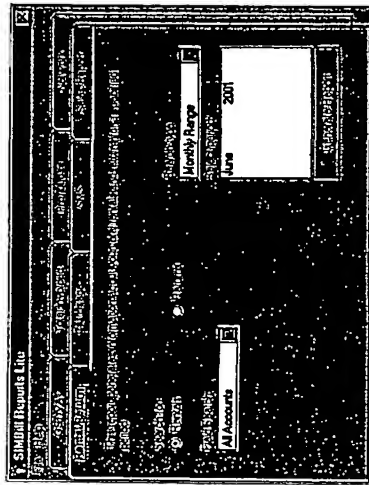
To print an invoice click on the print icon, second from left on top. This will print an invoice. You can reprint any time before next rental by returning the sim and clicking on the print icon. After you have done a new rental on that sim this information cannot be retrieved from the sim card. You can retrieve all the information from the rental, return and call and payment data through the reports program every time. As the customer information is stored on the computer that did the rental or return. Please ensure that all return logs and branch locations are copied or imported to a central location for consolidated reports of all data.

SIMBIII Reports Lite User Manual

Introduction

SIMBIII Reports Lite is a comprehensive report writer for use with SIMBIII and its associated products. Utilizing your existing SIMBIII data, this program creates useful reports for auditing and bookkeeping purposes, and incorporates advanced transaction searching capabilities to detect any potentially fraudulent usage.

To ensure you have access to the most up to date information, all of your SIMBIII log files are automatically imported when you run the report writer.



There are eight reports that can be generated from your SIMBIII data, all of which can be selected by clicking the appropriate tab in the main screen.

Data Ranges

While each report has its own individual options and features, all require a time period from which to obtain their results.

When selecting a time period for a report, you have the following two options:

- **Monthly Range** - allows you to select a range of whole months (i.e. July 2000 to June 2001). Only those months found in the SIMBIII data will be displayed for convenience.
- **Specific Range** - allows selection of a specific date range (i.e. 01/06/2000 to 13/07/2001)

These two modes have been included to provide both convenience and flexibility. The Monthly Range allows reports to be generated over whole, monthly ranges. The specific range is designed to allow more detailed, date specific ranges for advanced auditing purposes.

Report Sorting

Once generated, all reports can be sorted by various fields, including Date, Agent, Location, MSISDN and ICCID, depending on the specific report.

LINE	QTY	UNIT	PRICE	AMOUNT	TAX	TOTAL	DATE
1	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
2	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
3	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
4	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
5	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
6	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
7	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
8	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
9	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
10	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
11	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
12	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
13	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
14	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
15	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
16	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
17	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
18	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
19	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
20	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
21	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
22	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
23	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
24	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
25	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
26	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
27	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
28	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
29	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
30	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
31	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
32	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
33	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
34	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
35	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
36	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
37	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
38	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
39	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
40	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
41	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
42	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
43	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
44	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
45	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
46	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000
47	4.00	EA	1.00	4.00	0.00	4.00	3/1/2000

To sort by a specific column, click on the header of that column (i.e. Agent), and the report will automatically re-sort the information.

Printing

..All eight reports can be printed by clicking the Print button, providing hard copies for auditing and bookkeeping purposes. .

Report Exporting

The reports are exportable to a variety of formats for use with other database or billing systems. To export a report, simply click on the Export Report button and select a format.

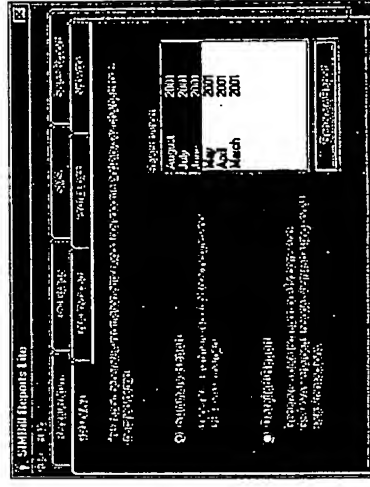
Reports Available

The following is a listing of all available reports and the features of each:

GST/VAT Report

Generates a report of total income and any tax charged for a specified period. This report is often necessary to ascertain total tax liabilities for the income generated.

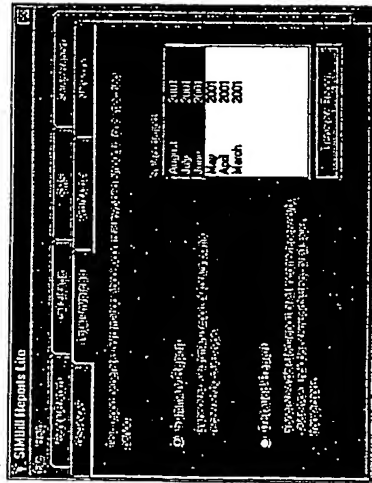
- **Summary Report** – provides a basic breakdown of income into revenue and tax charged.
- **Detailed Report** – provides the same details as the summary, along with a breakdown listing of each individual income transaction for the period.



Total Invoiced Report

Generates a report of total income divided into individual categories, as well as any tax charged for a specified period. This report determines your actual sources of income, reporting both rental and call charges.

- Summary Report - provides a basic breakdown of income into call charges, rental charges and tax charged.
- Detailed Report - provides the same details as the summary, along with a breakdown listing of each individual income transaction for the period.

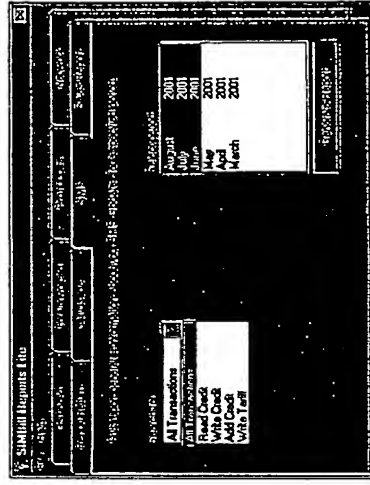


SMS Report

Generates a report of all over-the-air SMS Updates sent in a specified period. These updates allow various changes to be made to the SIM card mid-reboot, and therefore may affect the final credit limit.

There are several options for transaction searching. These are:

- All transactions - report all SMS transactions
- Read Credit - report all messages that queried a SIM's credit limit
- Write Credit - report all messages that wrote a new credit limit to a SIM
- Add Credit - report all messages that added credit to a SIM
- Write Tariff - report all messages that wrote a tariff update to a SIM



Sales Report

Generates a report about total income received at time of return. Details of cash and credit card payments are available, broken down into individual locations and agents for auditing purposes.

Location - generate report for selected Location(s)

Agent - use Agent(s) at selected Location(s)

The screenshot shows a software window titled "SIMBIL Reports Line". It contains a "Sales Report" section with a "Monthly Report" dropdown menu. The dropdown menu is open, showing a list of months: August 2001, July 2001, June 2001, May 2001, April 2001, and March 2001. There are also input fields for "Location" and "Agent".

Network Calls Report

Generates a report of total network charges for a range of MSISDNs over a specified period, as well as the numbers dialed, call duration and network reference.

This is where the total cost of calls charged to you by your network can be ascertained.



This is the Import Calls button

Firstly a Network Call Log file must be specified. Click on the Import Calls Button, and select a source file. Network logs may be stored in any order or location, however they need to be imported before any Network reports are generated.

When generating the Network Calls Report, the following must be specified:

- MSISDN - select a single number or an entire range from which to extract costing information and call details

The screenshot shows a software window titled "SIMBIL Reports Line". It contains a "Network Calls Report" section with a "Monthly Report" dropdown menu. The dropdown menu is open, showing a list of months: April 2001, March 2001, February 2001, January 2001, November 2000, October 2000, and April 2000. There are also input fields for "Location" and "Agent".

All Network Call Logs must be in the following comma-delimited format:

60

MSISDN
Number Dialed
Date (YYYY-MM-DD or YYYY/MM/DD)
Time (hh:mm)
Duration (seconds)
Cost (i.e. 2.45; NOT \$2.45)
Reference

Please note that the format of your Network file must be the same as this one:

6421378575, 0011642170070, 2001-04-20, 22:22:19, 173.0, 2.35, 530011100423118
6421378575, 0011642170070, 2001-03-15, 20:26:09, 61.0, 0.89, 530011100423118
6421378575, 0011642170070, 2001-03-24, 21:26:09, 128.0, 5.64, 530011100423118

There may or may not be a plus (+) in front of the MSISDN.

i.e. +6421378575 or 6421378575 are both acceptable.

61

Profit/Loss Report

Generates a report of total costs and income for a selected range of MSISDNs by comparing Network call charges to Return Logs.

Select the Network Log file to use by clicking the Import button and selecting the appropriate file. (See Network Calls Report for more information on Network Call Logs and their format.)

This report allows you to search by:

MSISDN - select a single number or an entire range from which to extract costing information, income levels and total profit.

The screenshot shows a window titled 'Simulink Reports Line'. It has a search bar with 'MSISDN: 6421378575' entered. Below the search bar, there are fields for 'Date Range' and 'Date Format'. The 'Date Range' is set to '2001-03-15 to 2001-04-20'. The 'Date Format' is set to 'YYYY-MM-DD'. To the right, there is a table with columns for 'Date', 'Time', 'Duration', 'Cost', and 'Income'. The table contains several rows of data, including dates like '2001-03-15', '2001-03-16', '2001-03-17', '2001-03-18', '2001-03-19', '2001-03-20', '2001-03-21', '2001-03-22', '2001-03-23', '2001-03-24', '2001-03-25', '2001-03-26', '2001-03-27', '2001-03-28', '2001-03-29', '2001-03-30', '2001-03-31', '2001-04-01', '2001-04-02', '2001-04-03', '2001-04-04', '2001-04-05', '2001-04-06', '2001-04-07', '2001-04-08', '2001-04-09', '2001-04-10', '2001-04-11', '2001-04-12', '2001-04-13', '2001-04-14', '2001-04-15', '2001-04-16', '2001-04-17', '2001-04-18', '2001-04-19', '2001-04-20', '2001-04-21', '2001-04-22', '2001-04-23', '2001-04-24', '2001-04-25', '2001-04-26', '2001-04-27', '2001-04-28', '2001-04-29', '2001-04-30', '2001-05-01', '2001-05-02', '2001-05-03', '2001-05-04', '2001-05-05', '2001-05-06', '2001-05-07', '2001-05-08', '2001-05-09', '2001-05-10', '2001-05-11', '2001-05-12', '2001-05-13', '2001-05-14', '2001-05-15', '2001-05-16', '2001-05-17', '2001-05-18', '2001-05-19', '2001-05-20', '2001-05-21', '2001-05-22', '2001-05-23', '2001-05-24', '2001-05-25', '2001-05-26', '2001-05-27', '2001-05-28', '2001-05-29', '2001-05-30', '2001-05-31', '2001-06-01', '2001-06-02', '2001-06-03', '2001-06-04', '2001-06-05', '2001-06-06', '2001-06-07', '2001-06-08', '2001-06-09', '2001-06-10', '2001-06-11', '2001-06-12', '2001-06-13', '2001-06-14', '2001-06-15', '2001-06-16', '2001-06-17', '2001-06-18', '2001-06-19', '2001-06-20', '2001-06-21', '2001-06-22', '2001-06-23', '2001-06-24', '2001-06-25', '2001-06-26', '2001-06-27', '2001-06-28', '2001-06-29', '2001-06-30', '2001-07-01', '2001-07-02', '2001-07-03', '2001-07-04', '2001-07-05', '2001-07-06', '2001-07-07', '2001-07-08', '2001-07-09', '2001-07-10', '2001-07-11', '2001-07-12', '2001-07-13', '2001-07-14', '2001-07-15', '2001-07-16', '2001-07-17', '2001-07-18', '2001-07-19', '2001-07-20', '2001-07-21', '2001-07-22', '2001-07-23', '2001-07-24', '2001-07-25', '2001-07-26', '2001-07-27', '2001-07-28', '2001-07-29', '2001-07-30', '2001-07-31', '2001-08-01', '2001-08-02', '2001-08-03', '2001-08-04', '2001-08-05', '2001-08-06', '2001-08-07', '2001-08-08', '2001-08-09', '2001-08-10', '2001-08-11', '2001-08-12', '2001-08-13', '2001-08-14', '2001-08-15', '2001-08-16', '2001-08-17', '2001-08-18', '2001-08-19', '2001-08-20', '2001-08-21', '2001-08-22', '2001-08-23', '2001-08-24', '2001-08-25', '2001-08-26', '2001-08-27', '2001-08-28', '2001-08-29', '2001-08-30', '2001-08-31', '2001-09-01', '2001-09-02', '2001-09-03', '2001-09-04', '2001-09-05', '2001-09-06', '2001-09-07', '2001-09-08', '2001-09-09', '2001-09-10', '2001-09-11', '2001-09-12', '2001-09-13', '2001-09-14', '2001-09-15', '2001-09-16', '2001-09-17', '2001-09-18', '2001-09-19', '2001-09-20', '2001-09-21', '2001-09-22', '2001-09-23', '2001-09-24', '2001-09-25', '2001-09-26', '2001-09-27', '2001-09-28', '2001-09-29', '2001-09-30', '2001-10-01', '2001-10-02', '2001-10-03', '2001-10-04', '2001-10-05', '2001-10-06', '2001-10-07', '2001-10-08', '2001-10-09', '2001-10-10', '2001-10-11', '2001-10-12', '2001-10-13', '2001-10-14', '2001-10-15', '2001-10-16', '2001-10-17', '2001-10-18', '2001-10-19', '2001-10-20', '2001-10-21', '2001-10-22', '2001-10-23', '2001-10-24', '2001-10-25', '2001-10-26', '2001-10-27', '2001-10-28', '2001-10-29', '2001-10-30', '2001-10-31', '2001-11-01', '2001-11-02', '2001-11-03', '2001-11-04', '2001-11-05', '2001-11-06', '2001-11-07', '2001-11-08', '2001-11-09', '2001-11-10', '2001-11-11', '2001-11-12', '2001-11-13', '2001-11-14', '2001-11-15', '2001-11-16', '2001-11-17', '2001-11-18', '2001-11-19', '2001-11-20', '2001-11-21', '2001-11-22', '2001-11-23', '2001-11-24', '2001-11-25', '2001-11-26', '2001-11-27', '2001-11-28', '2001-11-29', '2001-11-30', '2001-12-01', '2001-12-02', '2001-12-03', '2001-12-04', '2001-12-05', '2001-12-06', '2001-12-07', '2001-12-08', '2001-12-09', '2001-12-10', '2001-12-11', '2001-12-12', '2001-12-13', '2001-12-14', '2001-12-15', '2001-12-16', '2001-12-17', '2001-12-18', '2001-12-19', '2001-12-20', '2001-12-21', '2001-12-22', '2001-12-23', '2001-12-24', '2001-12-25', '2001-12-26', '2001-12-27', '2001-12-28', '2001-12-29', '2001-12-30', '2001-12-31'. The table also includes a 'Total' row at the bottom.

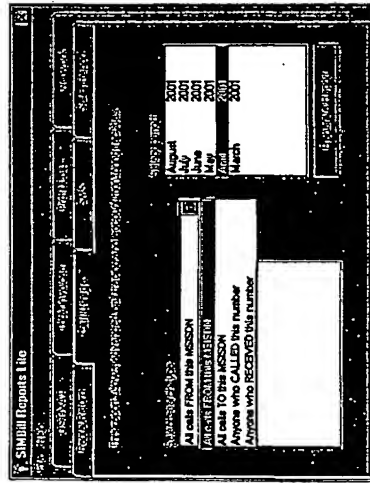
Call Usage Report

This comprehensive report provides advanced call tracing facilities for accounting and security purposes.

The reports are generated using the call data generated at time of return from each account in SIMBIL.

There are four available searches:

- All calls TO this MSISDN - this report shows all calls made to this MSISDN from all other accounts
- All calls FROM this MSISDN - this report shows all calls made from this account
- Anyone who CALLED this number - this report shows all accounts that dialled this number
- Anyone who RECEIVED this number - this report shows all accounts that received any calls from this number



SMS

Updating files by SMS over the air

You can update sim cards over the air by SMS with the SIMBIL program.
To do this you must have SMS on your user level SIMBIL messenger and a wap modem or Nokia data suite card phone installed.

All over the air updates require an SMS to be sent. For more information on sending SMS's please see section "SMS Messenger".

Click on the SMS menu option in the SIMBIL window. A list of two options will pop down.

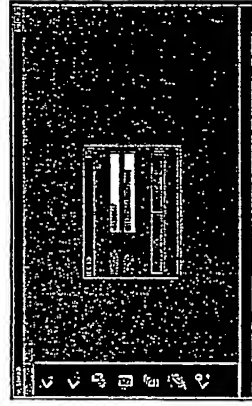
ADD CREDIT this allows you to append credit to the existing credit available.

WRITE CREDIT this will overwrite the credit balance to this amount instantly.
You could also use this to overwrite the credit to 0.00,
barring any outgoing calls

64

First try "ADD CREDIT"

Click SMS and select ADD Credit the following screen will appear

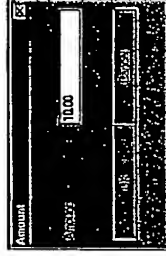


Enter the mobile number you are updating in the international format + Country code followed by number e.g. 0414141414 would be entered as +61414141414 in Australia.

You will also be asked for the ICCID number of the sim (we work on sim numbers). If you do not know the ICCID number just look at any log file of that mobile number.

65

Enter (or paste) the ICCID number and click on "OK"



You will then be asked for an amount. Enter the amount you wish to add, and click on "OK". A Message has been created that will automatically be transmitted with out any further action on your part, and a log file created, provided you have located SIMBILI messenger and have connected a cellular modem or phone to your computer see section SIMBILI Messenger.

If you have not received SIMBILI Messenger and attached a cellular phone or Wap modem to your computer the message will not automatically be sent. If the message is sent more than once it will only be credited once, if the message is sent to the Internet sim or phone it will not be credited.

If we click on WRITE CREDIT it is the same as ADD CREDIT except the amount requested will be credited as the new credit balance and not added to the existing balance. With this you can receive credit from the phone by sending an amount of 1.00.

Sending SMS's

Updating Sim card over the air

SDMBill Messenger is only method of sending SMS's to update credit balances. If you are going to be using this feature, we suggest purchasing SDMBill Messenger. Once installed all SMS messages will be automatically sent with no action on your part, just create the SMS as described in 5 above, the rest is automated.

SMS Messenger

Installing SMS Messenger

SMS Messenger is automatically installed when you install SIMBill to activate it all you need to do is specify license SMS Messenger on your registration form.

You will need a Warp cellular modem Available from you SIMBIII dealer.

When you receive the registration file that is copied onto your computer this will activate SIMBIII Messenger on your system with no additional installation.

Included with SIMBull messenger is SMS Buddy. This enables you to send any SMS to any mobile phone from your computer. You do not need an Internet connection for this.

Network Codes

Network & Country codes

Note: Exit codes are the prefixes you will dial from a country to make an international call e.g. Australia 0011 South Africa 09.

[illegible]

68

Cape Verde	Cabo Verde Telecom	425 01
Canada	Microcell	302 37
Chile	Entel Telecom	460 00
China	China Telecom	460 01
Congo	African Telecom	
Croatia	Croatian Telecom	
Cyprus	Cyprus Telecom	
Czech Rep.	Czech Telecom	
Denmark	Denmark Telecom	
Egypt	Egypt Telecom	
Estonia	Estonia Telecom	
Ethiopia	Ethiopia Telecom	
Finland	Finland Telecom	
France	France Telecom	
Germany	Germany Telecom	
Ghana	Ghana Telecom	
Greece	Greece Telecom	
Greenland	Greenland Telecom	
Guam	Guam Telecom	
Hong Kong	Hong Kong Telecom	
Hungary	Hungary Telecom	
Iceland	Iceland Telecom	
Ireland	Ireland Telecom	
Italy	Italy Telecom	
Japan	Japan Telecom	
Korea	Korea Telecom	
Latvia	Latvia Telecom	
Lithuania	Lithuania Telecom	
Luxembourg	Luxembourg Telecom	
Malaysia	Malaysia Telecom	
Maldives	Maldives Telecom	
Mali	Mali Telecom	
Moldova	Moldova Telecom	
Mongolia	Mongolia Telecom	
Morocco	Morocco Telecom	
Mozambique	Mozambique Telecom	
Netherlands	Netherlands Telecom	
New Zealand	New Zealand Telecom	
Norway	Norway Telecom	
Poland	Poland Telecom	
Portugal	Portugal Telecom	
Romania	Romania Telecom	
Russia	Russia Telecom	
Saudi Arabia	Saudi Arabia Telecom	
Slovakia	Slovakia Telecom	
Slovenia	Slovenia Telecom	
Spain	Spain Telecom	
Sweden	Sweden Telecom	
Switzerland	Switzerland Telecom	
Taiwan	Taiwan Telecom	
Tanzania	Tanzania Telecom	
Thailand	Thailand Telecom	
Togo	Togo Telecom	
Tonga	Tonga Telecom	
Trinidad	Trinidad Telecom	
Tunisia	Tunisia Telecom	
Turkey	Turkey Telecom	
Ukraine	Ukraine Telecom	
United Kingdom	United Kingdom Telecom	
United States	United States Telecom	
Uruguay	Uruguay Telecom	
Uzbekistan	Uzbekistan Telecom	
Vietnam	Vietnam Telecom	
Yemen	Yemen Telecom	
Zambia	Zambia Telecom	
Zimbabwe	Zimbabwe Telecom	

69

India	India Telecom	404 10
Indonesia	Indonesia Telecom	404 11
Iran	Iran Telecom	404 12
Ireland	Ireland Telecom	404 13
Israel	Israel Telecom	404 14
Italy	Italy Telecom	404 15
Japan	Japan Telecom	404 16
Korea	Korea Telecom	404 17
Latvia	Latvia Telecom	404 18
Lithuania	Lithuania Telecom	404 19
Luxembourg	Luxembourg Telecom	404 20
Malaysia	Malaysia Telecom	404 21
Maldives	Maldives Telecom	404 22
Mali	Mali Telecom	404 23
Moldova	Moldova Telecom	404 24
Mongolia	Mongolia Telecom	404 25
Morocco	Morocco Telecom	404 26
Mozambique	Mozambique Telecom	404 27
Netherlands	Netherlands Telecom	404 28
New Zealand	New Zealand Telecom	404 29
Norway	Norway Telecom	404 30
Poland	Poland Telecom	404 31
Portugal	Portugal Telecom	404 32
Romania	Romania Telecom	404 33
Russia	Russia Telecom	404 34
Saudi Arabia	Saudi Arabia Telecom	404 35
Slovakia	Slovakia Telecom	404 36
Slovenia	Slovenia Telecom	404 37
Spain	Spain Telecom	404 38
Sweden	Sweden Telecom	404 39
Switzerland	Switzerland Telecom	404 40
Taiwan	Taiwan Telecom	404 41
Tanzania	Tanzania Telecom	404 42
Thailand	Thailand Telecom	404 43
Togo	Togo Telecom	404 44
Tonga	Tonga Telecom	404 45
Trinidad	Trinidad Telecom	404 46
Tunisia	Tunisia Telecom	404 47
Turkey	Turkey Telecom	404 48
Ukraine	Ukraine Telecom	404 49
United Kingdom	United Kingdom Telecom	404 50
United States	United States Telecom	404 51
Uruguay	Uruguay Telecom	404 52
Uzbekistan	Uzbekistan Telecom	404 53
Vietnam	Vietnam Telecom	404 54
Yemen	Yemen Telecom	404 55
Zambia	Zambia Telecom	404 56
Zimbabwe	Zimbabwe Telecom	404 57

70

71

[illegible]

54

Codes

81mb111 81mb111

Codes

SUBSTITUTE SHEET (RULE 26)

SUBSTITUTE SHEET (RULE 26)

8/m b 111 8/m b 111

Codes

USA	Bell South	310 15	1980	011
	Sprint sparc rum	310 02	1980	011
	Voice stream	310 26	1980	011
	Worldnet America	310 17	1980	011
	Cablelink	310 16	1980	011
	Powertel	310 27	1980	011
	Western 2000	310 11	1980	011
	Telecom All	310 27	1980	011
	Airfields	Inet + 920 877 2111	1980	011
Uganda	Dusomo GSM	434 04	810	010
	Rural	434 05	810	010
Vatican	Comitel	322 10	Inet + 3712 320 448	800/8000
	Telecom Italia MONIA	322 10	Inet + 39 349 300 390	800/8000
	IN	322 01	Inet + 39 339 8119	800/8000
	BIN	322 98	Inet + 39 320 3000 158	800/8000
Venezuela	Infoncat	734 01	800	000
	INFAT	735 02	800	000
Vietnam	MPT	452 02	800	000
	DOPT	452 02	800	000
Yugoslavia	Hobtel BRTT	220 01	Inet + 381 63 8848	99
	Telecom SFR	220 01	Inet + 381 63 8848	99
	Telecom Serbia	220 03	Inet + 381 64 719	99
Zaire	African Telecom Net			00
Zambia	Telecel			00
Zimbabwe	NET-ODE	648 01		00
	Netel	648 01		00
	Komnet	648 01		00

Trouble shooting

Most common problems

For any help or problem please e-mail help@tmbill.com and we will reply promptly.

Trouble shooting

Most common problems.

When you try to log in you get the message "Program expired".

Cause

Either the expiry date has arrived and you did not renew or

The settings on your computer have changed or

You have installed a new hard drive on your computer.

Action

E-mail us the problem together with the serial number of that program and your password, to get the serial number. Open SIMBIII click on help then about, the serial number will be displayed. We will send you a new registration file by e-mail. When you receive this file just double click it and the problem will be solved.

When you insert a sim card you get the message "unregistered Sim Card"

Cause

You have received new Slim Cards and not registered them.

Action

Insert the CD supplied click on the registration icon and add the new Sim Card ICCID numbers and submit to us, we will send you a new registration file, to install just click on it and the new sim will now be working.

Glossary of Terms

WAN
 Wide area network
LAN
 Local area network
CD
 Compact Disk
MSISDN
 Mobile Station Integrated Services Digital Network
ICCID
 Integrated Circuit Card ID
+
 Symbol for international call, country code or cell code
MT
 Mobile Terminating
MO
 Mobile Originating
MNC
 Mobile Network Code
MCC
 Mobile Country Code

VAT
 Value Added Tax
GST
 Goods and Services Tax
SMS
 Short Message Service
SIM
 Subscriber Identity Module
PC
 Personal Computer

Index

A	ADD CREDIT 19, 42, 51-53, 51-53 Additional Sim Card Readers 16
C	Call Usage Report 49 Click on the SIMBILL Icon 4, 11-14, 11-14, 17 CONFIGURING SIMBILL MESSENGER 6, 11, 16 Creating new tariffs 23
D	Descriptions of user rights 18
E	Entering the default settings 21
G	GST/VAT Report 40
I	INSTALLATION 4, 9, 15
L	License Fees 10-12, 15
M	Managing log files 33 Most common problems 63
N	Network Calls Report 46, 48 Now click on New User 18

Simbill Simbill

Index - 76

CLAIMS:

1. A method of billing the usage of mobile telephones comprising the steps of:
 - (a) entering a user program onto a SIM card,
 - (b) supplying a hirer with the programmed SIM card and software required for rendering accounts and controlling the use of the mobile telephones upon the termination of a hire period.
- 5 2. A method as claimed in claim 1 wherein the software enables the hirer or to set tariffs and credit limits, independently of network suppliers.
- 10 3. A method as claimed in claim 1 the user program and software enables the hirer to add or deduct credit over the air using SMS systems.
- 15 4. A method as claimed in claim 1 wherein the user program provides the hirer with the ability to:
 - (a) create and alter credit limits,
 - (b) store customer information,
 - (c) set tariffs for calls,
 - (d) block disallowed calls.
- 20 5. A method as claimed in claim 4 wherein the user program provides the hirer with the ability to allow free calls at its discretion.
- 25 6. A SIM card resident cellular phone billing system for performing the method of any one claims 1 to 5 the system comprising:
 - (a) a host processor unit having a P.C. application, and
 - (b) a SIM card reading apparatus adapted to access and applet associated with the SIM card, characterised in that the host processor at point of issue is programmable using the P.C. application to control the use of a cellular phone and on return of the cellular phone to its point of issue, and re entry of the SIM card to the SIM card reader, to read the SIM card and generate information as to its usage.
- 30 7. A billing system as claimed in claim 6 wherein the program of the host processor can transfer information on call costs to the SIM card.
8. A billing system as claimed in claim 6 or 7 wherein the program of the host processor can transfer information relating to the telephone user to the

SIM card.

9. A billing system as claimed in claim 6 wherein the program of the host processor can read information stored on the SIM card relating to calls made, numbers dialed and tariffs associated with the calls.

10. A billing system as claimed in any one of claims 6 to 9 including a cellular phone modem which enables over the air programming and adding or amending credit balances of a SIM card.

1/3

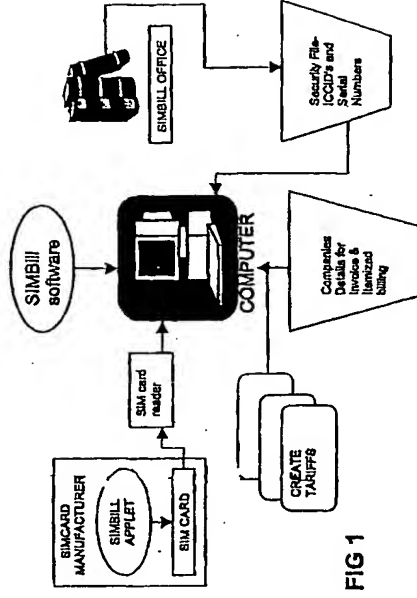


FIG 1

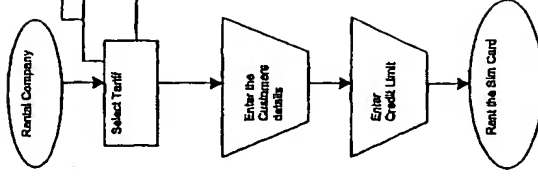


FIG 2

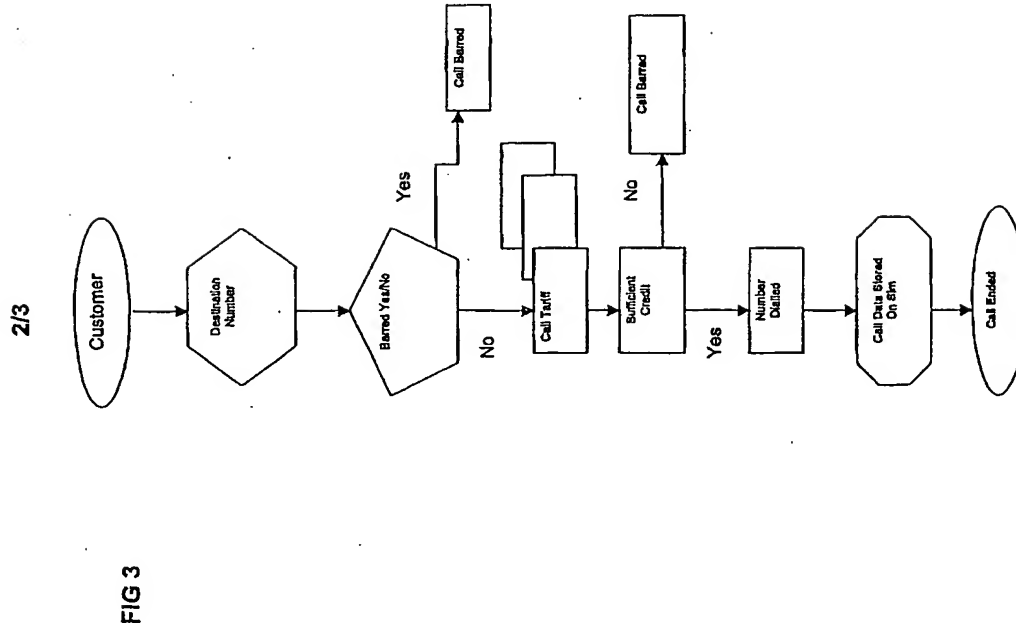


FIG 3

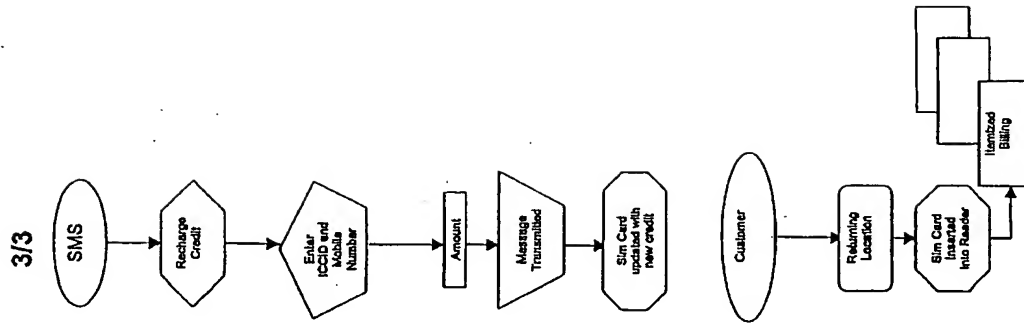


FIG 4

FIG 5

INTERNATIONAL SEARCH REPORT		International application No. PCT/AU01/01423
A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : H04M 15/00, H04M 17/00, H04Q 7/32		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
WPAT: KEYWORDS- PHONE, RENT, HIRE, BILL, ACCOUNT, CHARGE, SIM, MOBILE AND SIMILAR		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Derwent Abstract Accession No. 2000-443961/39, Class T04, DE 200 04 892 U1 (SAUER) 31 MAY 2000 & US 2001/0023180 A1 20 SEPTEMBER 2001 Whole document	1 - 10
X	WO 99/41919 A2 (SWISSCOM AG et al) 19 AUGUST 1999 Whole document	1 - 10
X	Derwent Abstract Accession No. 98-273672/25, Class W01, DE 298 00 711 U1 (SWISSCOM AG) 14 MAY 1998 & US 6223026 B1 (MARTSCHITSCH) 24 APRIL 2001 Whole document	1 - 10
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "B" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another claim or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other information "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to underpin the principles of theory underlying the invention "X" document of particular relevance to the claimed invention but not an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "Z" document member of the same patent family		
Date of the actual completion of the international search 21 December 2001		Date of mailing of the international search report 2 FEB 2002
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WOODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6245 3929		Authorized officer R.W.J. FINZI Telephone No.: (02) 6283 2213

INTERNATIONAL SEARCH REPORT		International application No. PCT/AU01/01423
C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/24229 A1 (MCGREGOR et al) 8 AUGUST 1996 Whole document	1, 2, 4 - 6, 8 - 10 3, 7
Y	With AU-A-80834/98	
X	US 5325418 A (MCGREGOR et al) 28 JUNE 1994 Whole document	1, 2, 4 - 6, 8 - 10 3, 7
Y	With AU-A-80834/98	
Y	AU-A-80834/98 (ALCATEL ALSTHOM COMPAGNIE GENERALE DELCTRICE) 4 MARCH 1997 Whole document	3, 7

INTERNATIONAL SEARCH REPORT	
Information on patent family members	
<p>This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.</p>	
International application No. PCT/AU01/01423	

Patent Document Cited in Search Report				Patent Family Member			
DE	20004892	FR	2806569	US	2001023180		
WO	9941919	AU	22620/99	EP	1057350		
DE	29800711	JP	11196198	US	6223026		
WO	9624229	AU	4901096	BR	9606875	CA	2211892
		CN	1176039	EP	808547	EP	1067752
		US	5577100	US	6198915	US	2001000777
US	5325418	US	5625669	US	6243574	AU	2947895
		WO	9600481				
AU	8083498	AU	8083498	CA	2243617	EP	899973
		FR	2767626	JP	11136752	US	6278885
END OF ANNEX							